

**REMARKS**

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated February 23, 2011 has been received and its contents carefully reviewed.

Claims 1 and 33 are hereby amended. Claim 10 is canceled without prejudice or disclaimer. Claims 23 and 24 were canceled previously. No new matter has been added. Accordingly, claims 1-9, 11-22 and 25-33 are currently pending, of which claims 25-32 are withdrawn from consideration. Reexamination and reconsideration of the pending claims are respectfully requested.

The Office Action objects to claim 25 as being of improper dependent form. To advance prosecution, Applicants have amended claim 25. Applicants respectfully request withdrawal of the objection to claim 25.

The Office Action rejects claims 1-2, 5, 7, 10-14, 17, 25, and 33 under 35 U.S.C. §102(b) as being anticipated by U.S. 2004/0119013 to Schleifer et al. (*Schleifer*). Claim 10 is canceled, so the rejection of claim 10 is moot. Applicants respectfully traverse the rejection of the remaining claims.

As required in M.P.E.P. § 2131, in order to anticipate a claim under 35 U.S.C. § 102, “the reference must teach every element of the claim.” *Schleifer* fails to teach all the elements of claims 1-2, 5, 7, 11-14, 17, 25, and 33, and thus cannot anticipate these claims.

Claim 1 recites, “a substrate (S) comprising **an active surface that is substantially non-wetting for said liquid of interest** contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and **the work zones (Zt) being substantially non-wetting for said liquid of interest.**”

*Schleifer* fails to teach at least these elements of claim 1. *Schleifer* discloses that “[i]n many embodiments, at least a portion of the substrate is hydrophobic … By ‘hydrophobic’ it is

meant that at least a portion of a surface of substrate is substantially if not completely unwettable and substantially if not completely liquid repellent for the sample contacted thereto ... In certain embodiments, at least a portion of a subject substrate is hydrophilic ... By ‘hydrophilic’ it is meant that at least a portion of a surface of a subject substrate is easily wettable for the type of sample contacted thereto ... In certain embodiments, a substrate surface may have one or more areas that are hydrophobic and one or more areas that are hydrophilic.” *Schleifer*, ¶0045. However, *Schleifer* does not teach that the substrate is wettable specifically for sample in contact therewith (i.e., the “sample of interest”).

Moreover, in the Experimental section, *Schleifer* discloses that “[a]n AP-MALDI substrate was prepared such that a portion of its total area (slight more than half) included fluid retaining structures according to the subject invention and other portion did not include any fluid retaining structures.” *Schleifer*, ¶0095. The Office Action states that the fluid retaining structures of *Schleifer* (e.g., 40 in Figure 5) read on the work zone of claim 1. Even if this is true, then the portions of the substrate that do not include fluid retaining structures would have to correspond to the “active surface” portion of the substrate in claim 1. Clearly, the portions of the substrate in *Schleifer* that do not include fluid retaining structures do not and cannot correspond to the “active surfaces” of claim 1 because the active surface in claim 1 must be “substantially non-wetting for the liquid of interest.”

Accordingly, claim 1 is allowable over *Schleifer*. Claims 2, 5, 7, 10-14, 17, and 25 variously depend from claim 1, and are also allowable for at least the same reasons as claim 1.

Independent claim 33 recites, “a substrate (S) comprising an active surface that is substantially non-wetting for said liquid of interest contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and the work zones (Zt) being substantially non-wetting for said liquid of interest.” Similar to the discuss above, *Schleifer* fails to teach at least these elements of claim 33. Accordingly, claim 33 is allowable over *Schleifer*.

Claim 33 also recites, “the borders are structures in relief presenting a height above the active surface between 5 and 20  $\mu\text{m}$ .” *Schleifer* also fails to teach at least this element of claim 33. The Office Action asserts that paragraph 57 of *Schleifer* reads on the height above the active surface. Applicants note that paragraph 57 of *Schleifer* relates to **the thickness of the fluid retaining structure**, not the height of any border. Thus, *Schleifer* does not teach or suggest borders having “a height above the active surface between 5 and 20  $\mu\text{m}$ .” Claim 33 is allowable over *Schleifer* for this additional reason.

Applicants therefore respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claims 1-2, 5, 7, 11-14, 17, 25, and 33.

The Office Action rejects claims 1-3, 8, 9, and 16 under 35 U.S.C. §103(a) as being unpatentable over *Schleifer* in view of US 6,210,894 to Brennan (*Brennan*). Applicants respectfully traverse the rejection.

To establish *prima facie* obviousness of a claimed invention, all the elements of the claim must be taught or suggested by the prior art. The combined teaching of *Schleifer* and *Brennan* fails to teach or suggest all the elements of claims 1-3, 8, 9, and 16, and thus cannot render these claims obvious.

As discussed above, *Schleifer* fails to teach or suggest at least the above-recited elements of claim 1, namely, “a substrate (S) comprising an active surface that is substantially non-wetting for said liquid of interest contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and the work zones (Zt) being substantially non-wetting for said liquid of interest.” *Brennan* does not cure the deficiency of *Schleifer*, as *Brennan* is also silent with respect to the above-recited elements of claim 1. Accordingly, claim 1 and its dependent claims 2, 3, 8, 9, and 16 are allowable over the combined teaching of *Schleifer* and *Brennan*. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-3, 8, 9, and 16.

The Office Action rejects claims 4 and 6 under 35 U.S.C. §103(a) as being unpatentable over *Schleifer* in view of U.S. 6,017,696 to Heller (*Heller*) and U.S. 5,582,697 to Ikeda et al. (*Ikeda*). Applicants respectfully traverse the rejection.

As discussed above, *Schleifer* fails to teach or suggest at least the above-recited elements of claim 1, namely, “a substrate (S) comprising an active surface that is substantially non-wetting for said liquid of interest contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and the work zones (Zt) being substantially non-wetting for said liquid of interest.” *Heller* and *Ikeda* do not cure the deficiency of *Schleifer*, as *Heller* and *Ikeda* are also silent with respect to the above-recited elements of claim 1. Accordingly, claim 1 and its dependent claims 4 and 6 are allowable over the combined teaching of *Schleifer*, *Heller*, and *Ikeda*. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 4 and 6.

The Office Action rejects claim 15 under 35 U.S.C. §103(a) as being unpatentable over *Schleifer*.

As discussed above, *Schleifer* fails to teach or suggest at least the above-recited elements of claim 1, namely, “a substrate (S) comprising an active surface that is substantially non-wetting for said liquid of interest contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and the work zones (Zt) being substantially non-wetting for said liquid of interest.” Accordingly, claim 1 and its dependent claim 15 are allowable over *Schleifer*. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 15.

The Office Action rejects claims 18-22 under 35 U.S.C. §103(a) as being unpatentable over *Schleifer* in view of Brennan and U.S. 2002/0168624 to Yuen (*Yuen*). Applicants respectfully traverse the rejection.

As discussed above, *Schleifer* fails to teach or suggest at least the above-recited elements of claim 1, namely, “a substrate (S) comprising an active surface that is substantially non-wetting for said liquid of interest contained in said box, a plurality of distinct work zones (Zt) formed on said active surface and each surrounded by a border (b) formed on said active surface that is substantially non-wetting for the liquid of interest, the borders not touching one another and having no common edge, and the work zones (Zt) being substantially non-wetting for said liquid of interest.” *Brennan* and *Yuen* do not cure the deficiency of *Schleifer*, as *Brennan* and *Yuen* are also silent with respect to the above-recited elements of claim 1. Accordingly, claim 1 and its dependent claims 4 and 6 are allowable over the combined teaching of *Schleifer*, *Brennan*, and *Yuen*. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 18-22.

The Office Action provisionally rejects claims 1-22, 25, and 33 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-39 of copending Application 10/576,345. Applicants respectfully disagree. As this is provisional rejection and both applications are pending, Applicants reserve the right to further address the double patenting rejection upon indication of allowability.

Applicants believe the application in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

Dated: August 23, 2011

Respectfully submitted,

By Matthew T. Bailey  
**Matthew T. Bailey**

Registration No.: 33,829  
McKENNA LONG & ALDRIDGE LLP  
1900 K Street, N.W.  
Washington, DC 20006  
(202) 496-7500  
Attorneys for Applicant